

*The Brightness of Saturn with Ring Invisible.*

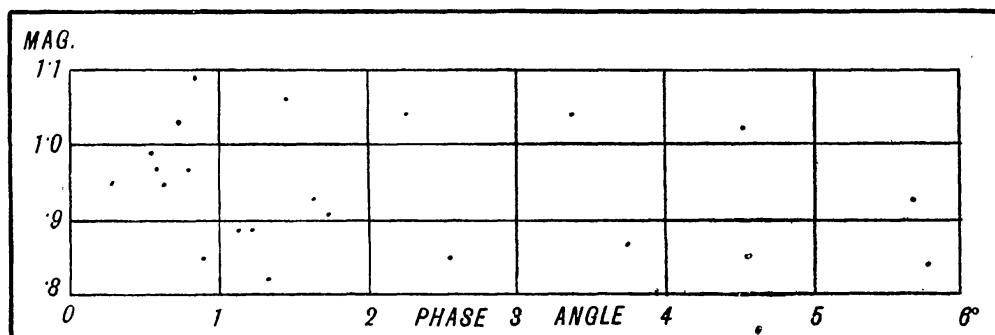
By J. M. Baldwin, M.A.

(Communicated by Sir David Gill, K.C.B.)

In a paper on photometric measurements of Saturn which appeared in *Monthly Notices*, vol. lxviii. p. 368, owing to an unfortunate mistake, a factor 2 had been omitted in obtaining the correction to be applied to the observed brightness to reduce it to the brightness in mean opposition, and in consequence the correction given is only half as great as it should be. In the following table the correct values are given, the observations being arranged in order of phase angle, the columns being respectively date of observation, phase angle, observed difference of magnitude Saturn -  $\alpha$  Aquilæ, correction to mean opposition, and the magnitude reduced to mean opposition, the magnitude of  $\alpha$  Aquilæ being taken as 0.96 (Müller, *Potsdam Publ.*, viii. p. 235, 1893). Further particulars of the observations are given in the paper above cited, the first four observations in the former table having been omitted, for reasons there mentioned.

Date.	$\alpha$ .	$\Delta M$ .	Corr.	$M_0$ .	Corr.	M.
1907	°					
Sept. 18	0.28	- .01	- .02	.93	+ .02	.95
13	0.53	+ .02	- .02	.96	+ .03	.99
22	0.59	+ .02	- .02	.96	+ .01	.97
12	0.63	- .02	- .02	.92	+ .03	.95
11	0.73	+ .06	- .02	1.00	+ .03	1.03
Sept. 24	0.80	+ .03	- .02	.97	.00	.97
10	0.83	+ .13	- .02	1.07	+ .02	1.09
25	0.90	- .09	- .02	.85	.00	.85
27	1.11	- .04	- .02	.90	- .01	.89
28	1.21	- .04	- .02	.90	- .01	.89
Sept. 29	1.32	- .10	- .02	.84	- .02	.82
4	1.46	+ .12	- .03	1.05	+ .01	1.06
Oct. 2	1.63	+ .02	- .03	.95	- .02	.93
3	1.74	.00	- .03	.93	- .02	.91
8	2.25	+ .13	- .03	1.06	- .02	1.04
Oct. 11	2.55	- .04	- .04	.88	- .03	.85
20	3.39	+ .16	- .05	1.07	- .03	1.04
24	3.74	+ .01	- .06	.91	- .04	.87
Nov. 3	4.51	+ .19	- .09	1.06	- .04	1.02
27	5.69	+ .20	- .17	.99	- .06	.93
Dec. 1	5.78	+ .13	- .19	.90	- .06	.84

To find if the observations show any variation of the brightness of the spheroid of Saturn with the phase angle, the observations have been further reduced by applying the reduction to "ring invisible" given by Seeliger in *Ast. Nach.*\* The reductions and the reduced values are given in the last two columns of the table. These reduced values are plotted against phase angle in the



accompanying diagram, and from this it appears that the alteration in brightness of the spheroid with phase angle, if any, must be very slight, and many more observations would be necessary to determine its magnitude.

*Observatory, Melbourne :*  
1909 January 20.

*Note on the remarkable Meteor of 1909 February 22, 7<sup>h</sup> 30<sup>m</sup>.*

By W. F. Denning.

A meteor of very exceptional character presented itself in the sky on Monday, February 22 last, passing in a nearly E. to W. direction above the English Channel, with a long flight, performed at moderate velocity and height. It was observed as far north as Nottingham, as far east as Colchester; and reports have come to hand from Plymouth, from places in South Wales, from the Channel Islands, and from Cherbourg, Brest, and other stations in the north of France.

The meteor was a fine one, of a blue colour, and it gave a succession of bright outbursts during the latter portion of its flight. At the end, its westerly direction appears to have been suddenly checked, and it turned earthwards, its incandescent material apparently spreading out and falling several degrees in a zigzag or wavy course.

The reddish train of sparks which flowed from the nucleus of the meteor quickly died away, but there immediately came out along the course a vivid streak of phosphorescence, which

\* "Über die Helligkeit des Saturn bei verschwundenem Ring," H. Seeliger, *A.N.*, 4263, clxxviii. 250, 1908.